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ABSTRACT

This paper is a description and discussion of aspects of the development of a competency-based teacher education (CBTE) program as a joint project of Glassboro State College and the Camden Public Schools. A list of general competencies as established at Glassboro is included in the first section of this paper. Other aspects of the CBTE program covered in this description are the assessment of competencies (copies of the competency recording form and worksheet are included, and an explanation of modular instruction (an example is enclosed). A final section presents a discussion of the program. This section notes that side effects that grew from the program included instructors functioning as a team, course content revision, and close college-school cooperation. A sample module from the program is appended. (JA)

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COMPETENCY-BASED TEACHER EDUCATION

A PRACTICAL ANALYSIS

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I

INTRODUCTION

Glassboro State College has joined with the Camden Public Schools in a Seventh Cycle Teacher Corps project. A major goal of the project is the development of a competency-based teacher education (CBTE) program.

Glassboro has approached CBTE in two ways. First, a list of general teacher competencies has been established. Second, Glassboro has converted many of the individual courses taught for Teacher Corps to a CBTE format using modules as the mode of instruction.

II

GENERAL COMPETENCIES

Since an empirically based list of teacher competencies was unavailable, Glassboro established its own list. Although incomplete and in need of validation, the list does provide direction for the program to follow. The list of teacher competencies is presented below.

A List of Teacher Competencies

(A Working Document)
September, 1972

The following list of teacher competencies is based on the assumption that the ultimate test of effective teaching is pupil learning. If desired pupil learning does not take place, the effectiveness of teaching is questionable.

A second assumption is that the environment in which the teaching-learning process takes place is important. Pupil learning should occur within an environment that promotes a desire to attend school and participate in its offerings. The environment should be one in which pupils actively contribute and are rewarded for their efforts.

On the basis of these assumptions, a list of teacher competencies has been developed. The competencies have been grouped into several areas and a rationale provided for each area.

The list of competencies is intended to be tentative and will change as input is received from research, practical experience, and individuals interested in teaching education.

I. Competence in Instructional Skills

Teachers should be able to design a sequence of learning activities for individual pupils. They should be able to arrange for pupil involvement with the planned activities. The result of pupil involvement with the learning activities should lend to the desired learning outcomes on the part of the pupil. With regard to instructional skills, the teachers should be able to do the following:

A. Establish long term objectives for pupils.

B. Establish short term objectives which are consistent with the long term objectives.

C. Select materials and procedures which are consistent with the established objectives.

D. Apply the teaching plans for individual pupils.

E. Maintain continuous measurement of pupil progress.

F. Modify materials and/or procedures if data indicates changes are needed.

II. Competence in Learning Theory

Teachers should be familiar with one or more theories of learning. It is assumed that decisions guided by theories that have been supported by practice and research are preferable to personal, subjective decisions. Teachers should be aware that theories are continuously subject to change. With regard to theories of learning, teachers should be able to do the following:

A. State the major points of a theory of learning.

B. Design teaching strategies that reflect the systematic use of a particular learning theory.

C. Apply the teaching strategies.

D. Collect data to indicate the effect of the systematically applied learning theory principles.

III. Competence in Materials and Programs

A vast amount of materials are available for classroom use. Teachers are being given increased responsibility in the choice and use of materials. At times these materials are organized into complete programs in particular subject areas. In choosing materials and programs teachers should be able to do the following:

A. List several resource materials available for classroom use in every basic elementary subject area.

B. Classify materials as applicable to group and/or individualized use.

C. Adapt pre-packaged materials for situation-specific use.

D. Describe several major programs and their advantages in the basic elementary subject areas.

IV. Competence in Establishing a Positive School Environment

Teachers should develop a positive classroom environment. The environment will include a sensitive relationship between teacher and pupils. Rewards available in the environment should be determined in terms of pupil perspective. In order to establish a positive environment the teacher should be able to do the following:

A. Identify expressed pupil needs.

B. State and translate language pupils use in informal settings.

C. Identify reinforcers for individual pupils.

D. Apply reinforcers for pupil achievement.

E. Observe pupils in free time situations and list individual pupil activities in order of frequency-of occurence.

III

ASSESSMENT OF COMPETENCIES

The types of competencies included in the Glassboro list mandate the use of three types of evaluative criteria. Knowledge criteria are used for a competency such as in number II.A: "State the major points of a theory of learning." Teaching behavior criteria are used for number IV.D: "Apply reinforcers for pupil achievement." Product (pupil behavior change) criteria are used for number II.D: "Collect data to indicate the effect of the systematically applied learning theory principles." The third, product criteria, is considered the highest standard but is only acceptable if the classroom environment is also judged to be adequate.

In order to monitor the progress of each intern in achieving specific competencies, a recording form was devised. The form is illustrated in Figure 1. It is to be used in conjunction with the worksheet illustrated in Figure 2.

The general competencies are included on the assessment form (Figure 1). These competencies are behavioral statements that do not include the criteria to be used in evaluation or the setting in which they are to be displayed. In other words, the competencies state what is to be measured but not how to evaluate adequacy in specific settings.

The assessment worksheet (Figure 2) is designed to take care of the evaluative component. Competencies must be present and at certain levels reasonable within unique settings. Since the setting and criteria will be different for each intern, the worksheet categories are left undefined.

In the Glassboro Teacher Corps program, the worksheets will be completed by a team consisting of the college instructor, classroom teacher, school supervisor, and intern. Team consensus will be used to define the four worksheet categories (Figure 2).

An example of a completed worksheet (Figure 3) follows. As can be seen, the criteria for achieving a competency are described. In addition, responsibility for collection and assessment of data is assigned.

IV

MODULAR INSTRUCTION

Glassboro State College chose modules as the primary mode of instruction for teaching the general and course-specific competencies. A module is a statement of an objective and a set of learning activities

FIGURE 1

STUDENT ASSESSMENT FORM FOR
TEACHER CORPS LABORATORY EXPERIENCES

_____ NAME

_____ SUPERVISOR

_____ DATES

Not Demonstrated = 1
Minimum Level = 2
Advanced Level = 3

INSTRUCTIONAL SKILLS

1. Establish long term objectives for pupils.

a. Arithmetic	a. _____
b. Language Arts	b. _____
c. Reading	c. _____
d. Science	d. _____
e. Social Studies	e. _____
_____	
f. Social Behavior	f. _____

2. Establish short term objectives which are consistent with the long term objectives.

a. Arithmetic	a. _____
b. Language Arts	b. _____
c. Reading	c. _____
d. Science	d. _____
e. Social Studies	e. _____
_____	
f. Social Behavior	f. _____

FIGURE 2

ASSESSMENT WORKSHEET

Objective/Competency: _____

_____

_____

_____

1. Field Setting _____

_____

_____

_____

2. Indicators _____

_____

_____

_____

3. Criteria _____

_____

_____

_____

4. Data Collection Procedures _____

_____

_____

_____

FIGURE 3

ASSESSMENT WORKSHEET

Objective/Competency: With regard to theories of learning, teachers should be able to design teaching strategies that reflect the systematic use of a particular learning theory.

1. Field Setting Classroom - Group A in arithmetic.

2. Indicators Lesson plans should indicate provisions for success in achievement by each pupil, methods for collecting continuous response data, and procedures for reinforcing correct responses. (Operant learning theory is being applied.)

3. Criteria 90% of lesson plans for one month in arithmetic and spelling should contain provision for the three applications.

4. Data Collection Procedures a. Interns will submit lesson plans to the college instructor.

b. The college instructor will assess adequacy in terms of the criteria.

designed to help the student achieve the objective. Generally, the module format consists of six parts: objectives, prerequisites, pre-assessment procedures, instructional activities, post-assessment procedures, and remediation procedures. Figure 4 illustrates the module format adopted by the Glassboro Teacher Corps project.

Module clusters are sets of related modules. Usually modules are arranged sequentially within the clusters and lead to the terminal objectives stated in the last module. Appendix A illustrates the introductory pages and last module of a module cluster that is being used in the Glassboro State College/Camden Teacher Corps project. This module cluster represents part of the Practicum that Teacher Corps interns are taking. Module clusters may represent parts or the whole of a course.

V

RECORDING COMPLETION OF MODULES

In theory, module clusters allow the student to work at his/her own pace. Practically, though, college regulations and project termination dates prohibit unlimited time for the completion of clusters. Colleges may deal with time limits by placing full "responsibility" on the students. Given deadlines and ample time, students can be held accountable for completing their work within the time limits.

Glassboro has rejected the view that the intern is completely responsible for meeting the deadlines. Completion of module clusters is thought of as a shared responsibility of intern and instructor.

FIGURE 4

TTP-001.01 (OSC) Defining Operant Terms

Objective

The student will be able to define and give examples consistent with operant psychology of the following terms:

operant behavior	continuous reinforcement
reinforcement	intermittent reinforcement
reinforcer	token reinforcement
extinction	punishment
satiation	generalization
positive reinforcement	discrimination
negative reinforcement	chaining
shaping	S^D R S^R

Prerequisite

TTP-002.00 (OSC)

Pre-Assessment

The student has the option of defining and giving examples orally or in writing of the terms listed above.

Instructional Activities

1. Read Managing Behavior 2 by Hall.

2. Using the objective of this module and Managing Behavior 2 as a guide, restudy the same material by using any appropriate source listed in the appendices.

Post-Assessment

Post-assessment procedures consist of alternate forms of the pre-assessment.

Remediation

No remediation activities have been predetermined. These would be decided upon by the student in consort with his faculty advisor

In order to alleviate lack-of-completion problems, Glassboro has used a recording procedure with the modules of one cluster that provides continuous feedback to both instructor and intern. Figure 5 illustrates the format used. A graph is prepared for each intern and for the class as a whole. The graph is brought up to date monthly and distributed to the interns. Interns and instructors can compare completion rates with the suggested rate indicated on the graph and view progress towards completion of the cluster.

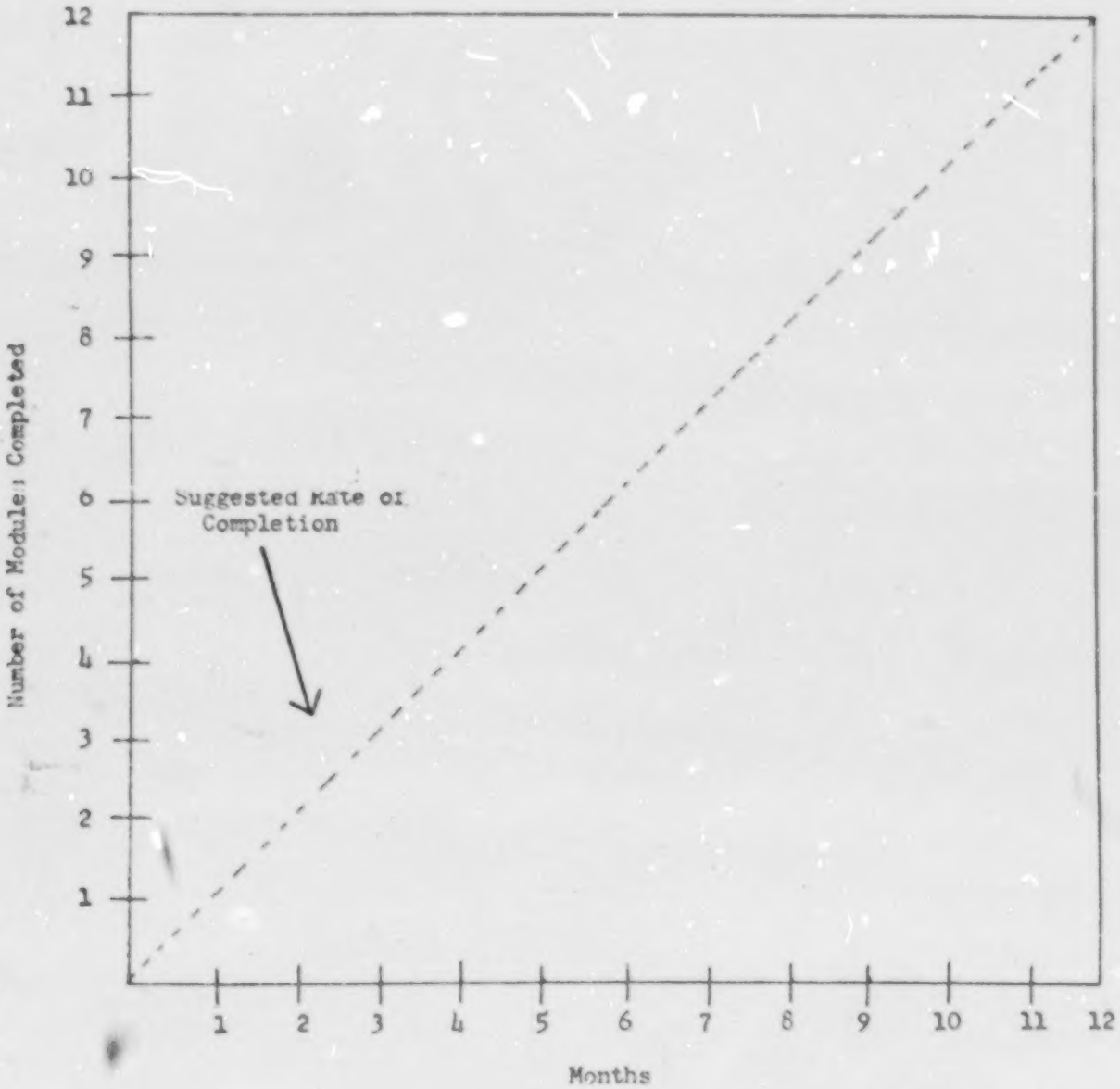
VI

DISCUSSION

Several technical aspects of the Glassboro Teacher Corps program have been discussed. Associated with these primary aspects are many interesting side effects. For example, the development and use of general competencies by a group of college instructors forces them to act as a team. The conversion of regular courses to a CBTE model leads to an examination and probable revision of course content. The product criteria (pupil behavior change) used in assessing competency suggest that colleges and school systems must closely cooperate in the training of teachers. Because the direction and extent of behavior change is determined by the school, close cooperation between schools and colleges is mandated. For example, if the college asks the student teacher to teach some aspect of modern math to a child, this must be compatible with the school curriculum. It must also involve appropriateness for the student at that time. These related aspects may prove to be as important as the primary techniques in accomplishing the changes.

FIGURE 5

STUDENT:



CBTE appears to be objective. Competencies are stated in behavioral terms. Module clusters (in time) bring most students up to stated levels. Assessment includes product criteria. But for all its objectivity, CBTE must still stand on a subjective footing. Competencies must be chosen and criteria for assessment established without empirical guidance.

Minimally, CBTE provides the opportunity for built-in self-correction. Needed changes can be forthcoming with sensitive, continuous assessment.

APPENDIX A

Reference System Designation:	TTP - 001.00 (GSC)
Program:	Seventh Cycle Teacher Corps Program at Glassboro State College, Glassboro, New Jersey
Component:	Teaching Theories and Practices
Module Cluster:	Reinforcement Principles for Classroom Use
Developer:	Dr. George Brent
Date of Development:	Fall, 1972

The work presented or reported herein was performed pursuant to a Grant from the Teacher Corps, U. S. Office of Education, Department of Health, Education and Welfare.

Instructions for Using a Glassboro State College Modular Cluster

A Glassboro State College Modular Cluster aims at arranging a learning experience in a very specific way. The goal of the cluster is to facilitate successful, self-paced learning for as many students as possible.

1. Glassboro State College modular clusters are intended to be used by teacher education students with the cooperation of an instructor. The instructor will give a brief explanation about the particular modular cluster. This should include the rationale for the cluster as well as general arrangement for completing the module.

2. After the meeting with the instructor, the student can begin work on the modular cluster. Within a cluster the modules are presented sequentially.

3. When a student begins to study a module, he should read over the pre-assessment procedures. A number of alternatives are then available. For example, the student may decide after reading the pre-assessment procedures that he is competent in that skill area. He may then complete the entire pre-assessment test and discuss the result with the instructor. The instructor will then be able to verify the student's competence.

4. A second choice is possible, if the student feels unsure of the material as presented in the pre-assessment. He can then skip the pre-assessment and complete the module step by step, including the post-assessment procedures.

5. The instructor will consult with the student after he has finished the post-assessment. At this point, if the student and instructor feel the competency involved has been demonstrated, the student will move to the next module in the cluster. If the post-assessment reveals some deficiency, remediation will be assigned and another form of post-assessment will then be used.

TTP-001.00 (GSC) Reinforcement Principles for Classroom Use

General Objectives of Module Cluster

The purpose of this module is to enable students to define the basic operant terms, to state the basic operant principles, to read operant measurement charts, and to use operant principles and measurement in elementary classrooms with both social and academic behaviors.

Prerequisites to the Module Cluster

This module cluster does not require students to have any prerequisite competencies other than those which typically would be considered as program entrance requirement.

Modules Within the Module Cluster

This module cluster contains modules. These are as follows:

TTP-001.01	(GSC)	Defining Operant Terms
TTP-001.02	(GSC)	Basic Operant Principles
TTP-001.03	(GSC)	Analysis of Behavior in Operant Terms
TTP-001.04	(GSC)	Operant Measurement Techniques
TTP-001.05	(GSC)	Recording Operant Behaviors
TTP-001.06	(GSC)	Specifying the Situation in which Measurement Takes Place
TTP-001.07	(GSC)	Examples of Operant Studies
TTP-001.08	(GSC)	Writing Instructional Objectives
TTP-001.09	(GSC)	Classroom Measurement of a Social Behavior
TTP-001.10	(GSC)	Classroom Measurement of an Academic Behavior
TTP-001.11	(GSC)	Modification of Social Behavior
TTP-001.12	(GSC)	Modification of Academic Behavior I
TTP-001.13	(GSC)	Modification of Academic Behavior II

TTP-001.13 (GSC) Modification of Academic Behavior II

Objective

The student will be able to -

1. Record baseline information on an academic behavior for every member of an instructional group (4-10 members).

2. Modify the academic behaviors that are judged deficient by the student.

3. Report all results using the standard reporting format (Managing Behavior I) and supporting graphs.

Prerequisite

TTP-001.12 (GSC)

Pre-Assessment

The student may submit graphs previously completed that meet the specifications included in the objective.

Instructional Activities

1. Read Managing Behavior 1 by Hall.

2. Read Managing Behavior 2 by Hall.

3. Read Managing Behavior 3 by Hall.

4. Use any appropriate resource in the appendices as a guide.

Post-Assessment

The student will have a discussion with the instructor based on the report and graphs submitted. Procedures employed in the study must be consistent with operant principles and reported correctly.

Remediation

No remediation activities have been predetermined. These would be decided upon by the student in concert with his faculty advisor and/or team leader.